CHIPS

THE DEPARTMENT OF THE NAVY'S INFORMATION TECHNOLOGY MAGAZINE

CURRENT ISSUE   BACK ISSUES   AUTHOR INDEX   BROWSE TAGS   ABOUT CHIPS   GO

✉ Email

Policy Leads Innovation

By Thomas Kidd - April-June 2017

Often what appears to be innovation is actually the result of incremental change applied to a problem over a long period of time. With enough time, and enough persistence, anything that is physically possible can and likely will be accomplished. The challenge for policymakers is to lead these changes, rather than lag behind them.

Too often policy is created as a reaction to change, rather than in anticipation. This can be especially problematic if policy must change to enable innovation to thrive. And the results can be catastrophic for promoting innovation when enabling policies takes years, or even decades, to enact. Innovation can be delayed, or even stalled completely, unless policymakers make an extraordinary effort to lead, rather than follow innovation.

An even greater challenge than anticipating innovation decades in advance is garnering support to begin these processes with little or no functioning examples of an innovative technology or concept. That challenge is further amplified when technological cost and complexity are inconceivable today, despite reasonable assumption that both will be reduced in the ensuing decades.

The DON Spectrum Team addresses these challenges every day. Global spectrum policy is established by a special body under the United Nations, the International Telecommunications Union Radiocommunication Sector (ITU-R). Policy is published in the form of an International Radio Regulations treaty. Changing Radio Regulations is done via the World Radiocommunication Conference (WRC), which meets every four years in Geneva, Switzerland.

All 197 member nations of the ITU-R must reach consensus before Radio Regulations are changed. For example, the next WRC is in 2019 (WRC-19). Preparation for every WRC is continuous. Changes to the International Radio Regulations typically take 8 to 12 years from preliminary proposal to final adoption; some changes may take 20years to accomplish.

The agenda for WRC-19 proposed changes to the Radio Regulation treaty were established at WRC-15, and many of the agenda items were first proposed at WRC-12, or earlier. After the World Radiocommunication Conference adopts changes to the Radio Regulations, implementation may take additional years or decades for the international community to implement new regulations and adapt legacy technology. The entire process, from conception to adoption, typically spans decades, and may be as long as half a century to completion. These long lead times are not unique to spectrum management; inevitably, they are common among all technologies that require global policy to implement.

Policymakers must maintain a broad vision of where innovation will occur. Knowing what specific technology will bring innovation to fruition is less important than understanding when innovation will mature and how it will be implemented. For global spectrum policymakers, timing is critical. Reacting to innovative solutions when they are brought to market is too late. Even reacting to conceptual and experimental ideas may be too late — if policymakers cannot anticipate and prepare for the change.

Within the federal government, incentives to accelerate research, development, and procurement may bring an innovative idea to fruition long before global policies can be changed. Thus, even when policymakers take steps to lead, they may still lag behind innovation. For policy to lead innovation, a policymaker must anticipate the innovation timeline *and understand the policy timeline* — then initiate policy change far enough in advance to enable global change before it becomes critical to do so.

What may seem like an impossible or improbable goal is actually achievable. Nearly every global innovation we have today was broadly forecasted decades before broad acceptance. Technology policymakers must look to forecasts, engage forecasters, and seek to understand their vision of the future that will eventually become reality. In this way, policy will lead innovation, and as a result, policy will advance innovation rather than impede it.

The DON Spectrum Team is continuously seeking the seeds of electromagnetic innovation to understand the state of the art and the art of the possible for spectrum-dependent technology that

Related CHIPS Articles

Deputy Secretary Discusses Future of Space Force at Space and Missile Systems Center

ICYMI: Artificial intelligence likely to help shape future battlefield, says Army vice chief

Junior Navy Technologists Create Autonomous Swarm Capability for Warfighters

Navy awards Boeing $805.3 million contract to design, build MQ-25A Stingray

Royal Australian Navy Delegation Visits NSWC Dahlgren Division in the Wake of RIMPAC 2018

Related DON CIO News

DON IT Conference Presentations Available

SECNAV Instruction 2400.2A Provides Updated DON Policy on Electromagnetic Environment Policy and Management

DON CIO Publishes Cyber Glossary

Strengthening the DON's Cybersecurity Posture

Strengthening the DON's Cybersecurity Posture

Related DON CIO Policy

Electromagnetic Environmental Effects and Space Weather Event Preparedness Policy and Management

Radio Receiver Frequency Assignments for Mission-Critical Systems

DON Electromagnetic Spectrum Harmful Interference Reporting

Spectrum Supportability Risk Assessment Process Using the Spectrum Supportability Integrated Process Portal

Streamlined Process for Commercial Broadband Deployment

will be available decades from now. Working within the international, national, federal, and military

spectrum policy processes, this team persistently strives to remove policy and regulatory barriers that would impede innovation from enhancing operations.

Tom Kidd is the director for DON Strategic Spectrum Policy for the Department of the Navy Chief Information Officer .

TAGS: Governance, Spectrum, Telecommunications

CHIPS is an official U.S. Navy website sponsored by the Department of the Navy (DON) Chief Information Officer, the Department of Defense Enterprise Software Initiative (ESI) and the DON's ESI Software Product Manager Team at Space and Naval Warfare Systems Center Pacific.

Online ISSN 2154-1779; Print ISSN 1047-9988
Hyperlink Disclaimer